

REMARKS

This Amendment is in response to the Office Action of September 24, 2004.

Status of the Application

Claims 1-50 were initially presented, and claims 2, 11, 33 and 38 were previously cancelled. Upon entry of this amendment, claims 1, 3, 4, 10, 12, 13, 19, 25, 31, 36, and 44 are amended. Accordingly, upon entry of this amendment, claims 1, 3-10, 12-32, 34-37, and 39-50 are pending and at issue.

In view of above amendments and the following remarks, reconsideration of the application is respectfully requested.

Rejections Under 35 U.S.C. § 112

Applicants respectfully traverse the rejection of claims 3, 4, 12 and 13 as lacking antecedent basis. These claims are now amended to depend from an independent claim (either claim 1 or claim 10), instead of depending from a cancelled claim. Applicants respectfully request withdrawal of this rejection.

Rejections Under 35 U.S.C. § 102(e) and § 103

Applicants respectfully traverse the rejections of claims 1, 3-10, 12-32, 34-37, and 39-50 as anticipated under 35 U.S.C. § 102(e) by U.S. Patent No. 6,606,527 to de Andrade, Jr. et al. (de Andrade) or as obvious under 35 U.S.C. § 103 over de Andrade in view of one or more of U.S. Patent No. 6,292,708 to Allen et al. (Allen); U.S. Patent No. 6,488,037 to Guldi (Guldi); U.S. Patent No. 6,000,830 to Asano et al. (Asano); U.S. Patent No. 6,438,436 to Hohkibara et al. (Hohkibara); and U.S. Patent No. 5,113,350 to Sargent (Sargent). Reconsideration and withdrawal of these rejections is respectfully requested.

Each of the pending independent claims is amended to more specifically clarify that the batch process campaign being created, edited, executed, etc. is a batch process campaign that is provided to a batch executive routine or other control device within a process control system which, in turn, uses the batch process campaign to actually effectuate operation of the batches within the batch process campaign. Thus, the recited batch campaign is more than a

simple schedule for the operation of a plant, but includes computer information or instructions that a batch executive routine (or other control device) uses to actually control devices within the plant to implement the batches defined by the batch campaign.

In particular, claims 1, 19 and 31 are amended to particularly recite a method that creates, executes or edits a batch process campaign which specifies batch process instructions or batches for a batch executive function, wherein the batch execution function sends instructions to a process controller for directing a set of field devices to carry out process steps associated with a batch being executed by the batch execution function. Likewise, claims 10, 25, 36 are amended to recite a process controller for initiating procedures in a set of field devices based on instructions associated with or defined by a created batch process campaign while claim 41 is amended to recite a process controller for controlling a set of field devices, wherein the process controller accepts instructions from the batch executive for directing the field devices to carry out the process steps associated with a batch of a created batch process campaign (as defined by a campaign messages).

None of the cited art discloses or suggests creating a batch process campaign that is integrated with a process controller and/or a batch executive function of a process control system, wherein the process controller or the batch executive function controls devices within a process plant to actually implement the batches or batch runs defined by the batch process campaign, as essentially recited by each of the pending claims.

While De Andrade describes a scheduling system that analyzes a number of variables, such as orders, raw materials, etc. to generate a set of production plans used to define a preferred operation of a manufacturing plant, these production plans or schedules are not the recited batch process campaign because these schedules are not used by a batch executive routine, a process controller or any other control device to actually cause a batch run to be implemented within a process plant. To the contrary, the schedules or production plans of the De Andrade system are simply visual, human readable plans that define, for a human such as a plant operator, the best or most efficient schedule to be used to produce the products contained within a set of received orders, to maximize the efficiency of the plant as defined by one or more objective functions, etc. The user or operator of the De Andrade system must still take manual steps to cause these plans to actually be implemented within the process plant (in this case a steel production plant). See for example, column 13, lines 8-13 of De

Andrade which clearly indicates that human resources are allocated to carry out the steps defined in the schedule or plan created in the stand alone computer of Figs. 3 and 4. At best, these manual steps include having a user set up different control procedures or routines to be implemented within the plant to actually effectuate the schedule created by the De Andrade system. At worst, these manual steps involve humans actually controlling the individual steel production machines to produce the products according to the created schedule.

No where does De Andrade disclose or suggest that the plan developed by the computer system of Figs. 3 and 4 can or should be used by or interface with a control device within a process plant to actually cause one or more product runs defined within the schedule to be implemented within the plant. In fact, De Andrade fails to disclose the structure that would be needed to perform this function, i.e., automatically implementing product runs defined by the created production plans. In particular, De Andrade fails to disclose any batch executive routine, process controller or any other control device that can be used to control plant equipment and thereby implement product runs as defined by the created schedule. Still further, De Andrade fails to disclose or suggest that the schedule created within the computer system of Figs. 3 and 4 can or should be sent to any process controller or batch executive routine, much less be used by a process controller or batch executive routine to actually cause (control) devices within the plant to implement a product run.

The pending claims, on the other hand, are directed to the functionality of defining a set of batch runs (a batch campaign) in a manner that allows or enables these batch runs (the batches within or defined by the batch campaign) to be automatically implemented by a process controller or a batch executive routine within a process plant without requiring further input or actions by the user. In particular, a user, using the claimed systems and methods, can define a plurality of batch runs to be implemented or executed within a process plant in the form of a batch process campaign in such a manner that the batch process campaign can be used directly by a batch executive routine and/or a process controller to actually implement the batch runs on actual equipment within the process plant. De Andrade simply fails to disclose or suggest this step of creating a batch process campaign that can be used directly within a process control device to implement the batches defined by the batch process campaign. While De Andrade is directed to a manner of defining an optimum schedule of product runs, this optimum schedule of batch runs is not a campaign that is sent

to or used directly by a control device to actually implement any batches within a process plant, nor does De Andrade suggest that this schedule can or should be used in this manner. For these reasons, De Andrade does not anticipate any of the pending claims.

In a similar manner, each of Allen, Guldi, Asano, Hohkibara and Sargent fails to provide a disclosure of, a suggestion of, or any motivation for creating a batch process campaign that defines a number of batch runs for a process plant in a manner that can be used by one or more control devices within the process plant to actually implement the batch runs, nor has the examiner cited these documents for this purpose. It is clear, however, that the prior art must make a suggestion of or provide an incentive for the claimed combination of elements for the examiner to be able to establish a *prima facie* case of obviousness. See, *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985). Because each of De Andrade, Allen, Guldi, Asano, Hohkibara and Sargent fails to disclose or suggest creating, editing, releasing, or using a batch process campaign that can be used by a batch executive routine, a process controller or some other control device to actually implement one or more batch runs within a process, it follows that no combination of these documents can render any of the pending claims obvious.

Conclusion

In view of the foregoing, it is respectfully submitted that the above application is in condition for allowance. If there is any matter that the examiner would like to discuss, the examiner is invited to contact the undersigned representative at the telephone number set forth below.

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Respectfully submitted,

By 

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